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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,976	02/05/2004	Allan E. Blackburn	A36080 - 072731.0202	5204

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NEW YORK, NY 10112-4498

EXAMINER

KASTLER, SCOTT R

ART UNIT	PAPER NUMBER
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1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/772,976

Applicant(s)

BLACKBURN ET AL.

Examiner

Scott Kastler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Means-Plus-Function Language in the Claims

Instant claim 1 as amended on 10/16/2006 now contains the means plus function term “means to inhibit formation of skull wings”, however, this means is not clearly defined in the specification, and therefore this term is not given any “means-plus-function” weight, but is rather seen to be fairly met by any “means” capable of performing the recited function, including the electron guns of the applied prior art.

Claim Objections

Claims 4 and 6 are objected to because of the following informalities: The above claims contain the following terms lacking proper antecedent basis:

1. “the second electron gun” on lines 3 of both of the above claims lacks any antecedent basis in independent claim 1 for which these claims depend.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

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art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The above claims contain the following limitations added in the amendment filed on 10/16/2006 which are not properly supported by the specification as originally filed:

1. The recitation that the apparatus includes a first electron gun of one type and a second electron gun of a second type, now required by all of the above claims is not supported by the originally filed specification, which does not include this limitation.

2. The recitation that the arrangement includes second, third, fourth and fifth sets of program instructions, where the originally filed specification does not recite any description of sets of program instructions.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Entrikin et al. Entrikin et al teaches a cold hearth melting and refining arrangement including a cold hearth holding a pool of molten (10 in Entrikin et al), an electron gun system comprising a plurality of electron guns, configured to generate electron beams (14 or 15 in Entrikin et al) and a programmable controller for moving the electron beams in a pattern for evaporating impurities that collect on the pool edge (see col. 4 lines 27-35 for example Entrikin et al) meeting the requirement of “means to inhibit skull formation” thereby showing all aspects of the above

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claims since the actual manner in which the electron gun is moved is a limitation directed to the use of the claimed apparatus and cannot be relied upon to further limit claims to the apparatus itself.

Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by either of Harker'776 or Harker'635. Both of Harker'776 and Harker'635 teach a cold hearth melting and refining arrangement including a cold hearth holding a pool of molten metal (10), and a plurality of electron guns configured to generate electron beams (15) and a programmable controller for moving the electron beam in any desired pattern (see col. 2 lines 45-61 of each of Harker'776 and Harker'635 for example), thereby showing all aspects of the above claims since as stated above, the actual manner in which the electron gun is moved is a limitation directed to the use of the claimed apparatus and cannot be relied upon to further limit claims to the apparatus itself.

Response to Arguments

Applicant's arguments, see the response, filed 10/16/2006, with respect to the rejection(s) of claim(s) 2, 3, 5 and 7-12 under 35 USC 102 and 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the introduction of new matter into the claims as explained above.

Applicant's further argument that independent claim 1 distinguishes over the applied prior art through the use of "means" language is not persuasive because as stated above the

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means recited in independent claim 1 is not clearly defined in the specification, and therefore can be fairly met by any arrangement which could be employed to perform the recited function.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

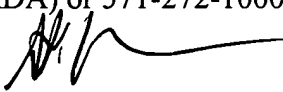
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Scott Kastler
Primary Examiner
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